

Leisure Trip vs. Business Trip: Whether Greater Self-Efficacy Increases Customer Satisfaction Under Hedonic/Utilitarian Conditions When Using Self-Service Technologies

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Abstract: In the past few decades, a considerable number of firms have applied a variety of Self-Service Technologies (SST) in their businesses to cut down labor costs and improve the customer experience. One of the questions in SST applications is whether the use of SSTs increases customer satisfaction. Prior research suggests self-efficacy could be an explanation for increasing customer satisfaction (to the brands) under SST applications. This paper explores whether customers with higher self-efficacy are more satisfied with SST application than the face to face transactions. More specifically, this paper tests whether the relationship between self-efficacy and customer satisfaction holds for transactions with hedonic or utilitarian motives. In the first experiment, participants rate their satisfaction to a five-star hotel during a leisure trip (hedonic motive) versus a business trip (utilitarian motive). In the next study, we manipulate people's perceived self-efficacy levels and explore whether customer satisfaction to the firms increases when customers' self-efficacy level increase. The self-efficacy manipulation is also performed under the two motive conditions (hedonic versus utilitarian) to show the moderating effect of the motives. This paper predicts that higher self-efficacy increases customer satisfaction to the firms while using SSTs but only when the consumptions happen based on utilitarian motives. Although the proposal suggests that hedonically driven brands may hurt customer satisfaction when using SSTs, further research should look into individual differences in which SSTs can still benefit the firm with hedonic products and services.

Key words: customer retention; micro marketing; firms and business economics

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1. Introduction

Imagine you earned a large amount of money and you planned a seven-day trip, reserving a nice room at a five-star hotel, and also decided to buy a fancy watch for yourself. However, instead of being greeted by professional and polite receptionists, the only way for you to check in is through self-service machines. You expect the sales assistant at the watch store to assist you with the purchase, but all you get is simply typing in your preferences on an artificial intelligence machine that introduces different brands and models to you. You are comfortable using technology and consider yourself as an enthusiast of self-service kiosks. But is this trip what

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you expected and are you happy and satisfied with the transaction at the hotel and store?

Customer's experience with retailers can be facilitated by self-service machines or interactions with humans. More recently, increasing labor costs have encouraged firms to choose more self-service options that help customers learn product information or perform the service for themselves (Lin & Heish, 2011). Information technology advancement further allowed companies to apply varieties of Self-Service Technologies ("SST"). According to a survey by the Zendesk Benchmark (2013), 67% of the respondents indicated that they would prefer using self-service tools to speak to a customer service agent (Davis, 2013). As consumers become more comfortable using technologies, the demand for SSTs rose sharply (NCR, 2009). With such trend in rising SST demand, understanding the consumers' psychology behind using SSTs is crucial.

1.1 Self-Service Technology (SSTs)

The application of SSTs has shown in general to increase customer satisfaction. Self-Service Technologies refer to "technological interfaces that enable customers to conduct an interaction independent of direct involvement of service employee," including kiosks, Internet, interactive voice response, and mobile services (Meuter 2000). These types of technologies change customer service from "low-tech, high-touch" into "high-tech, low-touch" (Bitner, 2000). SSTs are now widely applied in several fields such as self-service checkouts at grocery stores, online banking, as well as Automated Teller Machines (ATMs), telephone-based technologies, various interactive voice response systems and direct online connections and Internet-based interfaces. Research shows that customers are more prone to using SSTs when such technology works better than conventional interpersonal services (Bitner et al., 2002). Previous research suggests that SST usage may increase customer satisfaction with the service encounter and enhanced relationships with service organizations by inducing affective, temporal and instrument commitment (Beatson et al., 2006). Fleming and Artis (2010) suggest that by using SSTs, customers are involved with a unique shopping experience, which promotes customer satisfaction and retention. In general, prior studies show that SST usage encourages customers' interaction with the service provider and increases satisfaction. Yet do SSTs always improve customer satisfaction and attitude toward the brand?

1.2 Self-Efficacy

Self-efficacy may explain the rising demand for SSTs. Self-efficacy is an individual's expectation on his or her ability to perform or finish a task and it can indirectly affect behavioral intentions (Bandura, 1994, 1997). According to Dabholkar and Bagozzi (2002), greater self-efficacy enhances customers' positive attitude toward the use of SSTs. Meanwhile, with the improvement of customers' involvement in using SSTs, previous research indicates that SSTs can lower labor costs, enhance efficiency, improve productivity, and increase corporate performance (Bitner, Zeithaml, & Gremler, 2010; Dabholkar, 1996). Despite the benefits of using SSTs indicated by previous research, it is also important to know whether using SSTs in customer service process would boost customer's satisfaction, and whether this is applicable for both utilitarian and hedonic products. Thus, this proposal explores the differential effect of self-efficacy on customer satisfaction between utilitarian products and hedonic products.

In this proposal, customers' SST self-efficacy is defined as their confidence in how well they believe they can perform a SST machine. Dabholkar and Bagozzi (2002) argue that with greater self-efficacy, customers would hold a more positive attitude toward using SSTs, and customers would enjoy more fun throughout the process. Wang, Harris, and Patterson (2013) also suggest that greater self-efficacy would make customers more inclined to using SSTs. Such improved intention in using SSTs ultimately increases satisfaction with "enhanced relationships with service organizations" (Beatson et al., 2006). However, as mentioned earlier, such a rise in customer

satisfaction mainly happens in industries where people shop for primarily instrumental needs — people go to grocery stores for food, self-service gasoline pumps to fuel their car and ATMs to withdraw money. Previous literature has explored SSTs in fields where utilitarian-driven consumption is the dominant type.

1.3 Hedonic Versus Utilitarian Consumption

Previous researchers have generally categorized product types based on consumers' hedonic and utilitarian needs. Hedonic consumption refers to customers' "consumption behavior motivated by the desire for fun, excitement and pleasure, and often involves products or services that are frivolous or luxurious" (Chen, Lee, & Yap, 2017). In contrast, utilitarian consumption is typically motivated by functional needs and often involves products or services that are practical or necessary (Chen, Lee, & Yap, 2017). Studies show that various factors influence consumers' choice between hedonic products and utilitarian goods such as prior behavior (Kivetz & Zheng, 2006) and contextual factors (Biswas, Szocs, Chacko, & Wansink, 2017; Chae & Zhu, 2014; Tong, Zheng, & Zhao, 2013). Hedonic consumption is more likely to be determined by affective considerations like attitude or behaviors toward products (Pham, 1998). Consumers rely more on their feelings when making decision on hedonic consumptions, while functional evaluations are dominant during utilitarian consumption (Pham, 1998). The value of hedonic products is established mostly on internal, subjective, and discretionary standards, whereas the value of utilitarian outcomes depends on external, objective, and mandatory standards (Babin, Darden, & Griffin, 1994; Batra & Ahtola, 1990).

Even though hedonic or utilitarian needs significantly affect consumers' evaluations, previous research have rarely related people's interaction with SSTs and the role of self-efficacy between utilitarian and hedonic products. More specifically, this paper compares customers' satisfaction to the firms with utilitarian and hedonic motives when using SSTs. This proposal examines whether high self-efficacy increases customers' satisfaction in utilitarian consumption and/or hedonic consumption. Based on findings from the prior SST literature and theorization in the utilitarian/hedonic literature, we propose two main hypotheses to be tested:

Hypothesis 1: Greater self-efficacy increases customer satisfaction to the brand

Hypothesis 2a: High SST self-efficacy increases customers' satisfaction in utilitarian consumption under SST usage

Hypothesis 2b: High SST self-efficacy has no effect on customers' satisfaction in hedonic consumption under SST usage

2. Method

2.1 Study 1

2.1.1 Study Design and Participants

Study 1 tests whether high-self-efficacy increases consumer satisfaction after engaging in a transaction. 200 undergraduate students will be recruited to a lab with computers. They will be seated in a booth in front of a computer and told to follow the instructions appear on the screen. At the beginning, all participants will be shown the definition of self-efficacy ("Self-efficacy refers to an individual's expectation on his or her ability to perform or finish a task and it can indirectly affect behavioral intentions"), SSTs ("technological interfaces that enable customers to produce a service independent of direct service employee involvement") and will be required to rate their self-efficacy levels with the General Self-Efficacy Scale (GSES). Participants then will read: "You have used up your shampoo and you come to a supermarket with only self-checkout service to buy a new one". Participants

will be shown a picture of a supermarket shelf with all brands of shampoo (Head-Shoulders, Loreal, etc.). They will then be shown the check-out area of the supermarket with only self-check scanners. After looking over the pictures, participants will see a question: “How satisfied are you about the supermarket?” To answer this question, participants will evaluate their satisfaction level to the supermarket by completing a two-item scale satisfaction index. In addition, the reason that “buying a new shampoo” is selected as the consumption behavior is because it is rated as the consumption in the middle of utilitarian and hedonic motives in a pretest.

2.1.2 Self-efficacy and Dependent Variable

The General Self-Efficacy Scale (GSES) consists of 10 items evaluating individuals’ belief in their own ability. In this study, participants will rate their satisfaction level based on GSES questions. For example, item 4 is described as “I am confident that I could deal efficiently with unexpected events” (Schwarzer and Jerusalem, 1995). Items are assessed on a 4-point response scale with 1 = not at all true and 4 = exactly true. The responses to all 10 items are summarized to form a total score, ranging from 10 to 40 points, where a higher score indicates higher self-efficacy. In this proposal, participants whose scores higher than the median are in the high self-efficacy group; while others are in the low self-efficacy group.

We use a two-item measure for satisfaction (i.e., “How satisfied are you with the hotel brand?” and “How satisfied are you with the consuming experience?”) Both questions will be measured on a five-point Likert scale: very dissatisfied (1), dissatisfied (2), neutral (3), satisfied (4), very satisfied (5).

2.1.3 Predicted Results

Figure 1 predicts the result of study 1 that with higher self-efficacy, participants are more satisfied with the supermarket brand. To test Hypothesis 1, a linear regression should be performed on the “satisfaction” measure. A significant main effect of group is expected, indicating that participants in high self-efficacy group report higher satisfaction to the brand (supermarket in this case) than those in the contrary group.

In summary, people with high self-efficacy reported higher satisfaction than those with low self-efficacy. This predicted result is with a neutral product that was neither utilitarian nor hedonic in nature.

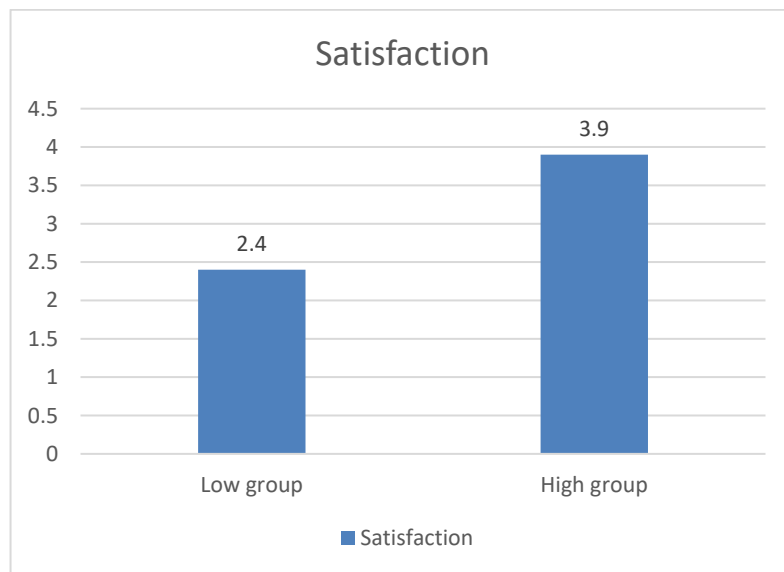


Figure 1 Study 1: Prediction: Satisfaction Fits the Pattern

Study 1 shows a positive relationship between self-efficacy level and customer satisfaction; however, the main goal of this proposal is to show whether SSTs do increase satisfaction through self-efficacy, under hedonic or utilitarian motives. Thus, we conduct study 2 to show this predicted relationship.

2.2 Study 2

2.2.1 Study Design and Participants

Study 2 is designed to test whether the positive relationship of self-efficacy and satisfaction differs between hedonic and utilitarian condition when using SSTs. 200 undergraduate students are randomly assigned to one of two conditions (hedonic condition vs utilitarian condition). The design and procedure of study 2 is identical to those in Study 1 with the exception of the following instructions for each condition. At the beginning, participants in both conditions will be shown a few pictures of a nice five-star hotel without any receptionist. They will also be shown a set of pictures of self-checkout machines placed in the hotel lobby. Participants in the utilitarian condition read: “You reserved a nice hotel room for business, however, you see no receptionist at the front desk. The only way for you to check in is self-service check-in machines. Then answer the following questions that evaluates your satisfaction level to the hotel, keeping in mind your goal for staying in the hotel is business purposes.”

In contrast, participants in the hedonic condition read: “You reserved a nice hotel room for leisure but there are no receptionist. The only way for you to check in is self-service check-in machines. Then answer the following questions that evaluates your satisfaction level to the hotel, keeping in mind your goal is to have fun.”

Similar to study 1, after finishing the above process, participants will be answering the two-item scale. Item 1 is described as “How satisfied are you with the supermarket brand?” Item 2 is described as “How satisfied are you with the consuming experience?” Both questions have the same options: very dissatisfied (1), dissatisfied (2), neutral (3), satisfied (4), very satisfied (5).

2.2.2 Predicted Results

Figure 2 shows the predicted results of Study 2. The effect of self-efficacy indeed differs between utilitarian and hedonic conditions. A one-way ANOVA should be conducted on the utilitarian data to test H2a and H2b. Figure 2 shows a main effect of self-efficacy, replicating results of study 1. Participants in high self-efficacy group generate higher satisfaction to the brand (hotel in this case) overall: satisfaction raises as self-efficacy increases on average. More importantly, a significant interaction is expected between the utilitarian/hedonic condition and self-efficacy. Although customer satisfaction becomes greater with higher self-efficacy level, such phenomenon mainly happens in utilitarian condition. In hedonic condition, even with higher self-efficacy level, customer satisfaction is almost unchanged.

In summary, when the motive is utilitarian, participants in the high self-efficacy group are more satisfied with the hotel than those in the low self-efficacy group. However, when the motive was hedonic, the satisfaction degree of participants in high group is expected not to be significantly different from those in the other group. The predicted result indicates that people with higher self-efficacy are more satisfied in companies’ SSTs using under utilitarian consumption while the satisfaction degree of people with high self-efficacy level is the same as those with low self-efficacy level.

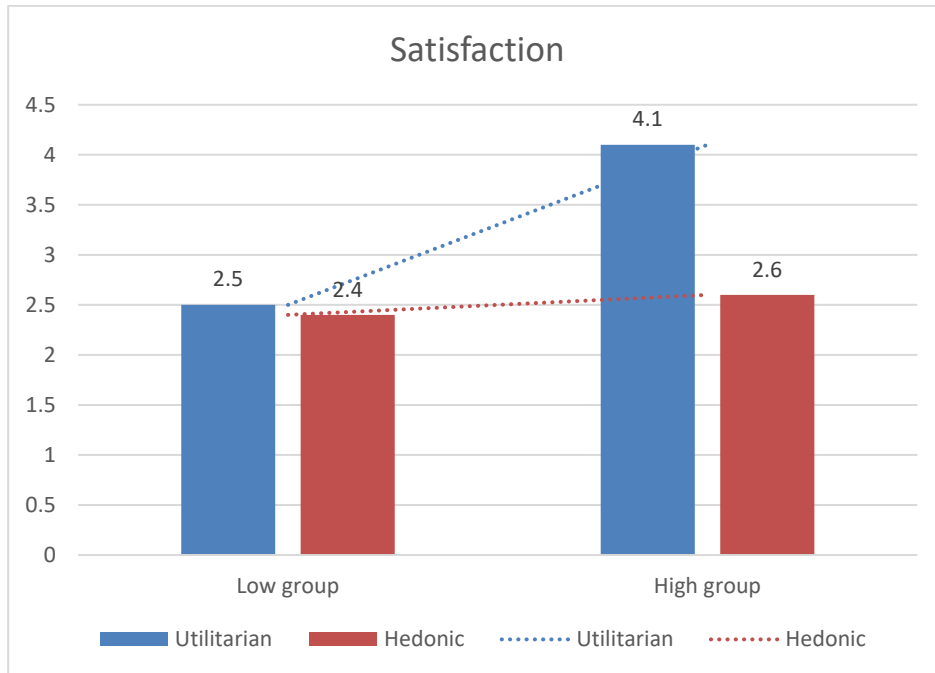


Figure 2 Study 2: Utilitarian Action Fits The Absolute Pattern and Hedonic Action Fits the Pattern

2.2.3 Discussion

Study 2 is expected to show that people with high self-efficacy tend to be more satisfied during utilitarian consumption than people with low self-efficacy. However, participants' self-efficacy level was measured and is only correlational and not causal. Therefore, study 2 cannot actually test whether increasing people's self-efficacy (which is higher self-efficacy level in H2) level would increase their satisfaction. Thus, in study 3 we try to manipulate individuals' self-efficacy level.

2.3 Study 3

2.3.1 Study Design and Participants

Study 3 is a 2 (control vs. high self-efficacy) \times 2 (utilitarian vs. hedonic) factorial design with identical process as the 400 undergraduate students chosen from university are randomly assigned to one of four conditions. In this study we directly manipulate perceived self-efficacy and the utilitarian/hedonic motives.

The first 200 participants are chosen as the control group. They will read exactly same instructions under utilitarian and hedonic condition in study 2. The other 200 participants consist the treatment group. Before reading the same instructions under utilitarian and hedonic condition in study 2, they will be shown an article discussing self-service machines are easy to use. For example, an article named "New to Self-Service? How to make the transition easy" could be shown (Bowie 2018). This manipulation worked as intended through a pre-test. After reading the instructions and articles, the participants are also required to finish the questions that evaluate their satisfaction degree.

2.3.2 Predicted Results

Figure 3 predicts the results of Study 3. By manipulating participants' self-efficacy levels, the effect of increasing self-efficacy differs between utilitarian and hedonic consumption. To test H2a and H2b, a one-way ANOVA should be conducted on the utilitarian data. The significant main effect is shown in the figure that satisfaction level of the treatment group is greater than satisfaction level in the control group. This means that by

raising participants' self-efficacy level, their satisfaction level increases on average. In addition, a significant interaction is expected between the utilitarian/hedonic condition and self-efficacy. The rise of customer satisfaction mainly happens in condition 1 — the utilitarian condition. Under the hedonic condition, even by increasing participants' self-efficacy in the treatment group, satisfaction virtually stays the same. Therefore, there is a significant interaction between hedonic/utilitarian condition when using SSTs.

In summary, during utilitarian consumption condition, participants in the treatment group are more satisfied with the hotel than those in control group. However, under hedonic consumption condition, the satisfaction degree of participants in treatment group is almost indifferent from those in control group. Study 3 improves H2a and H2b. Study 2 only shows participants' satisfaction is higher when they have greater self-efficacy. But by manipulating participants self-efficacy, study actually manage to increase self-efficacy showing that higher self-efficacy increases participants' satisfaction degree during utilitarian consumption while greater self-efficacy has almost no effect on people's satisfaction during hedonic consumption.

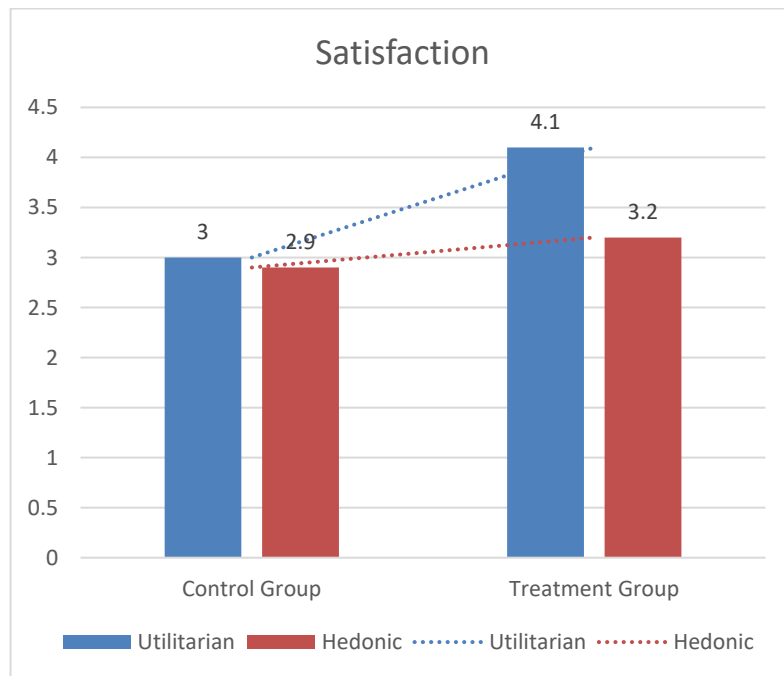


Figure 3 Study 3: Utilitarian action fits the absolute pattern and hedonic action fits the pattern

3. General Discussion

This proposal tests whether boosting consumers' self-efficacy level would increase their satisfaction to the brands when using SST machines. Since prior researchers have indicated that high self-efficacy would increase customer satisfaction (Dabholkar & Bagozz, 2002; Beatson et al., 2006). The first objective is to further examine whether people with high self-efficacy level are more satisfied with the brand using SSTs during consumption. All studies support the self-efficacy effect on satisfaction, showing that participants with higher self-efficacy level are more satisfied during the consumption.

The second objective is to explore whether the effect of self-efficacy on customer satisfaction differs between utilitarian consumption and hedonic consumption motives. Participants with high self-efficacy level are more

satisfied than those with low self-efficacy levels during utilitarian consumption motives. In contrast, both participants high self-efficacy level and low self-efficacy level have identical satisfaction degrees, which indicates that self-efficacy affects customer satisfaction to the brand using SSTs during utilitarian consumption but not hedonic consumption. Our 3 proposed studies provide a strong case that self-efficacy directly influences satisfaction through experimental manipulation.

3.1 Implications

To businesses, the first implication of this proposal is to pay attention to consumers' consumption motives. The studies of this proposal indicate that when brands use SSTs, customer satisfaction increases when self-efficacy increases only under utilitarian motives. For instance, in study 2 and 3, when people reserve the hotel for leisure, higher self-efficacy level does not really increase their satisfaction. Thus, firms that use SSTs should use advertisement to emphasize their products or services on their utilitarian function and try to create utilitarian motives for customers to increase customer satisfaction.

The second implication is that the companies should pay attention to customers' self-efficacy level when using SSTs. Although three studies show that using SSTs in business might increase customer satisfaction, these results are based on manipulating participants' self-efficacy. As we can see, people with higher self-efficacy have greater satisfaction to the brand. Thus, businesses can try to manipulate customers' self-efficacy when using SSTs so that they can increase customers satisfaction. For example, businesses can remind consumers that "SSTs are easy to handle" as shown in study 3.

To academic researchers, a potential future research is to explore further boundary conditions. Despite the prediction that utilitarian motives will drive satisfaction, it is possible that certain types of hedonic products or services may also benefit, and the satisfaction toward brand and product may differ. For example, in study 1, participants are required to rate their satisfaction toward the supermarket but not the shampoo. Study 1 does not explain why participants' evaluating result of satisfaction is toward the brand but not the product. Future studies could find more conditions that moderate the effect of self-efficacy and satisfaction toward the brand but not the product.

3.2 Conclusion

This proposal assumes that customer satisfaction depends on self-efficacy and different consumption motives (utilitarian vs hedonic) of consumers. Three studies are designed to test whether customers with higher self-efficacy are more satisfied with the firms under SST application than face to face transactions. More importantly, the proposal test whether the relationship between self-efficacy and customer satisfaction holds for transactions with hedonic or utilitarian motives. This proposal expands previous findings on Self-Service Technologies by making self-efficacy and hedonic/utilitarian motives as mediators.

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